

REMARKS

Claims 1 – 10 are pending in the application.

REJECTIONS UNDER 35 U.S.C. § 102

Claims 1 - 10 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,771,596 to Angle et al. Applicants respectfully traverse this rejection.

In independent claim 1, Applicants disclose:

1. A packet switch, comprising:

N input buffer sections, provided for respective N input lines, for storing unicast packets and multicast packets input through corresponding input lines;

a switch section for outputting a unicast packet to any of M output lines to which the unicast packet is transmitted when the unicast packet is input from each of the N input buffer sections, and outputting the multicast packet to a plurality of M output lines to which the multicast packet is to be transmitted when the multicast packet is input; and

a scheduler section for selecting the unicast packet or the multicast packet to be output from each of said N input buffers such that the input lines and the output lines cannot conflict each other for the unicast packet, and such that the input lines cannot conflict each other for the multicast packet.

Angle discloses an apparatus for scheduling multicast data (See, e.g., abstract of Angle).

The apparatus includes a plurality of input buffers 107, a switch fabric 120, and a scheduler 110 for scheduling outputs from the fabric 120 to output buffers 109 (see, e.g., FIGs. 1 and 2 of Angle). As illustrated for example in FIG. 4 of Angle, a multicast scheduling cycle is implemented at a series of input ports and output ports each requesting and granting interconnection, and each indicating an availability or unavailability based upon its request/grant status (see, e.g., column 9, line 10 through column 10, line 9 of Angle). As a result, for example, as described at column 10, lines 6 – 10:

... according to this scheduling cycle iteration, the multicast cell from input port 3 would be delivered to output port 2 and the multicast cell from input port 1 would be delivered to output ports 0, 1 and 3.

In other words, multicast scheduling is performed such that each multicast input ports has a unique output port allocation that cannot conflict with one another input port when multicast cells are input in a multicast cycle. As discussed by Applicants for example at page 2, line 25 – page 3, line 7 of Applicants' specification, this scheduling scheme results in conflict control process that is disadvantageously complex and ineffective for high-speed processing.

In sharp contrast to this approach, Applicants disclose and claim a scheduling process for multicast packets in which only the input lines are constrained from conflicting during a scheduling cycle (see, e.g., Applicants' FIG. 8 and independent claim 1).

As illustrated by Applicants' FIG. 8, unicast packets associated with an input line are assigned to unicast queues of crossbar switch section 300 that each have a dedicated assignment to one of output lines 1 – M. In sharp contrast, multicast packets associated with an input line are assigned to multicast queues of crossbar switch section 300 that are each communicate with each of output lines 1 – M. In this manner, multicast packets scheduled for transfer from the multicast queue of crossbar switch section 300 can be provided to each of output lines 1 – M without the need to further control the scheduling of output lines 1 – M.

Applicants respectfully submit that Angle neither discloses nor suggests this claimed feature of Applicants' invention. Accordingly, Applicants respectfully submit that claim 1 is not anticipated by Angle, and is therefore allowable.

As claims 2 – 10 depend from allowable claim 1, Applicant submits that claims 2 – 10 are allowable for at least this reason.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1 - 10, consisting of independent claim 1, and the claims dependent therefrom, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,



Thomas J. Bean
Reg. No. 44,528

CUSTOMER NUMBER 026304

(212) 940-8729

Docket No.: FUJG 18.948 (100794-11771)

TJB:fd